<u>CLAIMS</u>

What is claimed:

1   1.   A method of document management utilizing document corpora comprising:

2   gathering a source corpus of documents in electronic form;

3   modeling the source corpus in terms of document and domain structure

4   information to identify corpus enhancement parameters;

5   using a metalanguage to electronically tag the source corpus;

6   programming the corpus enhancement parameters into an intelligent agent;

7   and using the intelligent agent to search external repositories to find similar

8   terms and structures, and return them to the source corpora, whereby the source

9   corpus is enhanced to form a unicorpus.

1   2.   The method of claim 1, further comprising replicating the unicorpus in at least one

2   language other than the language of the unicorpus.

1   3.   The method of claim 2, wherein unicorpus replication includes translating terms

2   in the unicorpus with a machine dictionary.

1   4.   The method of claim 3, wherein unicorpus replication further comprises

2   performing an analysis of terms surrounding an undefined term to translate the

3   undefined term.

1   5.   The method of claim 4, wherein the analysis includes performing a natural

2   language analysis.

1   6.   The method of claim 4, wherein the analysis includes a statistical analysis.

1   7.   The method of claim 6, further comprising mining the unicorpus, wherein mining

2   includes locating tagged objects within the unicorpus.

1   8.   The method of claim 5, wherein mining of the unicorpus includes extraction of

2   concept systems.

3   9.   The method of claim 7, wherein the extraction of concept systems includes

4   determining semantic relations between individual concepts.

1   10.   The method of claim 5, further comprising replicating the unicorpus in at least one

2   other language to form a second unicorpus, wherein the second unicorpus is mined

3   to obtain useful objects in the other language.

1   11.   The method of claims 5 or 10, wherein the mining is performed selectively to assist

2   in a task.

1   12.   The method of claim 11, wherein said task includes authoring a document.

1   13.   The method of claim 11, wherein said task includes content based searching.

1   14.   The method of claim 11, wherein said task includes document management.

1   15.   The method of claim 11, wherein said task includes content management.

1   16.   The method of claim 11, wherein said task includes translation.

1   17.   The method of claim 16, wherein said translation includes corpus based machine

2   translation.

1   18.   The method of claim 1, further comprising providing access to the unicorpus over

2   a peer-to-peer network.

1   19.   The method of claim 18, wherein at least two unicorpora are connected via the

2   peer-to-peer network, such that sharing of resources occurs between the

3   unicorpora.

1   20.   A global documentation method comprising:

2   modeling a source corpus to determine search parameters;

3   providing the search parameters to an intelligent agent;

4   enhancing the source corpus by accessing resources outside of the source

5   corpus with the intelligent agent, where said intelligent tags the modeled source

6   corpus and retrieves resources according to the search parameters to create a first

7   unicorpus of tagged documents;

8   replicating the first unicorpus in at least one other language to form a

9   second unicorpus; and

10   selectively mining at least one unicorpus to perform a selected task.

1   21.   The method of claim 20, further comprising providing access to the unicorpus via

2   a shared network.

1   22.   The method of claim 21, wherein said shared network is a peer-to-peer network.

1   23.   The method of claim 21, further comprising routing documents between unicorpora

2   connected on the peer-to-peer network to a user.

1   24.   The method of claim 23, further comprising tracking the routing of the documents.

1   25.   The method of claim 24, further comprising managing rights to the documents

2   routed across the peer-to-peer network.

1   26.   The method of claim 20, wherein the first unicorpus has a plurality of terms

2   wherein replicating includes prepopulating the second unicorpus by using machine

3   translations of at least a portion of said first unicorpus terms.

1   27.   The method of claim 26, wherein prepopulating further comprises analyzing the

2   machine translated terms to define remaining terms in the first unicorpus.

1   28.   The method of claim 27, wherein analyzing includes a statistical analysis of terms

2   adjacent to the untranslated terms.

1   29.   The method of claim 27, wherein analyzing includes performing a natural language

2   analysis of the first unicorpus terms.

1   30.   A document management method comprising:

2   constructing models of a source corpus of documents;

3   deriving parameters from said models for the operation of an intelligent

4   agent over at least one external document repository;

5   enhancing the source corpus of documents by adding selected documents

6   retrieved by the intelligent agent to form an artificially enhanced corpus.

1   31.   The method of claim 30, further comprising analyzing the artificially enhanced

2   corpus to discover objects useful for at least one task;

3   tagging the objects within the artificially enhanced corpus to allow for

4   identification, description, and retrieval of the objects.

1   32.   The method of claim 30, further comprising replicating the artificially enhanced

2   corpus in a second language.

1   33.   The method of claim 32, further comprising performing cross-linguistic alignment

2   of the second language artificially enhanced corpus and the first artificially

3   enhanced corpus and tagging objects within the corpora according to the alignment.

1   34.   The method of claim 33, further comprising prepopulating terminology

2   management and translation memory management components of a computer-

3   assisted translation workstation with the objects tagged in the second language

4   artificially enhanced corpus.

1   35.   The method of claim 30, further comprising linking the artificially enhanced
2   corpora to at least one other artificially enhanced corpus using a peer-to-peer
3   network.

1   36.   The method of claim 35, wherein the intelligent agent adds documents to the
2   artificially enhanced corpus from another artificially enhanced corpus located on
3   the peer-to-peer network.

1   37.   The method of claim 30, wherein the external document repository includes the
2   internet.

1   38.   The method of claim 30, wherein the external document repository includes other
2   corpora resident on a peer-to-peer network.

1   39.   The method of claim 30, further comprising analyzing the artificially enhanced
2   corpus to discover objects useful for at least one task;
3   tagging the objects within the artificially enhanced corpus to allow for
4   identification, description, and retrieval of the objects.

1   40.   The method of claim 30, further comprising replicating the artificially enhanced
2   corpus in a second language.

1   41.   The method of claim 32, further comprising performing cross-linguistic alignment
2   of the second language artificially enhanced corpus and the first artificially
3   enhanced corpus and tagging objects within the corpora according to the alignment.

1   42.   The method of claim 33, further comprising prepopulating terminology
2   management and translation memory management components of a computer-
3   assisted translation workstation with the objects tagged in the second language
4   artificially enhanced corpus.

1   43.   The method of claim 30, further comprising linking the artificially enhanced
2   corpora to at least one other artificially enhanced corpus using a peer-to-peer
3   architecture.

1   44.   The method of claim 35, wherein the intelligent agent adds documents to the
2   artificially enhanced corpus from another artificially enhanced corpus located on
3   the peer-to-peer network.

1   45.   The method of claim 30, wherein the external document repository includes the
2   internet.

1   46.   The method of claim 30, wherein the external document repository includes other
2   corpora resident on a peer-to-peer network.

1   47.   A document management system operating according to a business method
2   comprising:
3   providing document management services including translation and
4   authoring services over a global information network to a customer, where the
5   customer has a source corpus of documents to be managed;
6   accessing the source corpus with an intelligent agent to analyze the source
7   corpus, identify selected objects within the source corpus, and tag the selected
8   objects with a metatag, wherein the analysis results in the generation of document
9   parameters programmed into the intelligent agent for searching of external
10   document repositories, wherein said intelligent agent uses said parameters to
11   identify and tag objects of interest in said external document repositories and
12   selectively retrieve the objects to enhance the source corpus; and
13   tracking rights in said retrieved objects to determine a royalty payable to an
14   owner of the rights.

1   48.   A document management system, in which a document manager is linked to a
2   plurality of unicorpora via a peer-to-peer network, the document management

3   system including a method of providing document management services including

4   authoring and translation comprising:

5   receiving a document management request from a unicorpora in the

6   network;

7   programming an intelligent agent with a set of parameters responsive to the

8   request;

9   deploying the intelligent agent to search unicorpora in the peer-to-peer

10   network to identify objects responsive to the request; and

11   transmitting the objects to the requesting unicorpus by way of the peer-to-

12   peer network.

1   49.   The document management system of claim 48, further comprising assembling the

2   identified objects according to the parameters into a document.

1   50.   An intelligent agent in a document management method comprising:

2   a program containing parameters derived from heuristic models of a source

3   corpus;

4   wherein said parameters are implemented in said program to locate and

5   retrieve documents from external document repositories.

1   51.   An intelligent agent used in a document management method comprising:

2   a program including a tagging subroutine operating under parameters, said

3   parameters causing the program to search a corporus and directing the tagging

4   subroutine to tag language objects within the corporus.

1   52.   An intelligent agent for searching external corpora comprising a processor having

2   search parameters programed to:

3   search external corpora according to the parameters for content, tag said

4   content identified in the search, a selectively retrieve the content.

1   53.   The method of claim 52, wherein the content includes document structures.

1   54.   The intelligent agent of claim 52, wherein the content includes document models.

1   55.   The intelligent agent of claim 52, wherein the content includes objects.

1   56.   The intelligent agent of claim 52, wherein the content includes concepts.

1   57.   Computer readable media tangibly embodying a program of instructions executable
2   by a computer to perform an enhancing of a source corpus in a document
3   management system comprising:
4   receiving electronic signals representing parameters including document
5   structure and document domain information regarding the source corpus;
6   searching external document repositories according to the parameters to
7   identify and tag document domain and structure information in the external
8   document repositories according to the parameters; and
9   reporting the tagged information for selective retrieval of the tagged
10   information.

1   58.   The computer readable media of claim 47, wherein the method further comprises
2   analyzing the tagged information to create a heuristic model defining document
3   domain and document structure information as a second parameter; and
4   causing electronic signals representing the second parameter to be reported
5   to a document management server to update said first parameters.

1   59.   Computer readable media tangibly embodying a program of instructions executable
2   by a computer to perform a method of managing documents in a document
3   management system comprising:
4   constructing heuristic models including a domain model and a
5   document structure model in a source corpus of documents;
6   using the heuristic models to derive parameters for the operation of an
7   intelligent agent over at least one external document repository;

8   enhancing the source corpus of documents by adding selected documents

9   using the intelligent agent operating under the direction of parameters derived from

10   the heuristic models to form an artificially enhanced corpus.

1   60.   A document management system, in which a source corpus is enhanced by the use

2   of an intelligent agent to create an artificially enhanced corpus by a method

3   comprising:

4   receiving electronic signals for representing a document from the intelligent

5   agent, the document including domain and structure information;

6   performing heuristic modeling of the source corpora and the received

7   document;

8   and sending electronic signals representing search parameters derived from

9   the modeling to the intelligent agent requesting another document according to the

10   search parameter.